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SMITH MOORE LLP P.O. BOX 21927 GREENSBORO, NC 27420			DEL SOLE, JOSEPH S	
			ART UNIT	PAPER NUMBER
			1722	
DATE MAILED: 04/28/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/733,697

Applicant(s)

REUTTER, TILMAN

Examiner

Joseph S. Del Sole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 34-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/27/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 34-36 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 3/6/06.

### ***Information Disclosure Statement***

2. The information disclosure statement filed 12/27/04 fails to completely comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because citation #27 is improper because the document is not a "Printed Publication", see MPEP § 2128. It has been placed in the application file, but the information referred to therein that has been crossed-out has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

### ***Claim Objections***

3. Claims 13, 15 and 25 are objected to because of the following informalities: a) in claim 13 "wherein the an operational" should be changed to --wherein the operational--; b) in claim 15 "wherein the an operational" should be changed to --wherein the

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operational--; c) in claim 25 "includes a filter an for filtering" should be changed to -- includes a filter for filtering--. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 3 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 3 sets forth that the apparatus utilizes a temperature sensor in communication with the controller and that the controller coordinates an operation of the operational heater and the regenerative heater (from its combination with claim 2). The only embodiment in which there is coordination between the operational and regenerative heaters (as required in claim 2) is in the embodiment of Figure 3 wherein the operational and regenerative heaters both utilize the same electric heaters. There is no description in the specification of any of 1) a temperature sensor, 2) a temperature sensor communicating with a controller or 3) a controller in this embodiment and therefore the combination of claim 3 is not enabled.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 17-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 is vague and indefinite because it is unclear whether the invention is limited to just the regenerative heater of the preamble or if the invention includes an operational heater and a spin beam, which are both positively recited. For examination purposes, claims 17-32 will be interpreted as claiming a spin beam with a regenerative heater, a operational heater and with other spin beam components. The claims should be clarified such that the preamble includes a feature generic to the positively recited features or the claims should be clarified such that features not generic to the preamble should not be positively recited in the claims.

Claim 28 is vague and indefinite because the limitation "and combinations thereof" is unclear. One would not know how a device with at least one heating coil and at least one heating rod differs from one with a combination of at least one heating coil and at least one heating rod.

Claim 30 is vague and indefinite because the limitation "and combinations thereof" is unclear. One would not know how a device with at least one convection heater and at least one radiation heater differs from one with a combination of at least one convection heater and at least one radiation heater.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2, 4-18, 24, 30, 31, 32, 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Landoni (3,767,347).

Landoni teaches an apparatus for spinning melt-spun filaments (Fig 1) having a spin beam (Fig 1); an operational heater (Fig 1, through #2); a regenerative heater (col 3, lines 40-44);

a controller for coordinating an operation of the operational heater and the regenerative heater (col 3, lines 8-52);

a polymer melt source for (Fig 1, #5) providing a polymer melt to the spin beam;  
the polymer melt source comprises an extruder (fig 1);

the polymer melt source provides the polymer melt to at least one spinning pump (Fig 3);

the at least one spinning pump meters the polymer melt to at least one spinning can through at least one melt-conducting part (Fig 3);

at least one spinning can receivers associated with the at least one spinning can (Fig 3);

the at least one spinning pump meters the polymer melt to a plurality of spinning cans through a plurality of melt-conducting parts (Figs 1 and 3) a total length of each of the plurality of melt-conducting parts is substantially the same (Fig 1);

including a plurality of spinning can receivers, at least one of the plurality of spinning can receivers is associated with each of the plurality of spinning cans (Figs 1 and 3);

at least one of the plurality of melt-conducting parts is associated with each of the plurality of spinning cans (Figs 1 and 3);

the operational heater is capable of heating the spin beam using a heat transfer medium (col 3, lines 37-44);

the heat transfer medium is one of an oil and a diphyl (col 3, lines 37-44);

the operational heater is capable of heating the spin beam to an operating temperature of between about 250 to 330.degree. C (the Examiner notes that the mediums taught are capable of the claimed temperature);

including a collection reservoir for the heat transfer medium (Fig 1, through #3);

a regenerative heater (Fig 1, #s 2 and 3, the Examiner notes that interpreting claim 17 leads to a different interpretation of the regenerative heater and operation heater) with operational heater (Fig 3) and spin beam (Figs 1 and 3), the regenerative heater being removably attachable to the spin beam (Fig 1, at #3);

the regenerative heater includes a trace heater in communication with a melt-conducting part of the spin beam (Fig 1);

further including an exhaust device for exhausting gases generated during a regeneration of the spin beam (Fig 1, #3 and col 3, line 40);

the regenerative heater includes one of at least one convection heater, at least one radiation heater, and combinations thereof (Fig 1);

wherein operational heater is capable of being operated as the regenerative heater to a temperature between about 450 to 550.degree. C (the Examiner notes that the mediums taught are capable of the claimed temperature);

the regenerative heater and the operation heater are the same (the Examiner notes that either heater can be used for multiple purposes since they can be used at different temperatures.

10. Claims 1-18, 20-21, 30, 31, 32, 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Krauss et al (5,866,050).

Krauss et al teaches an apparatus for spinning melt-spun filaments (Fig 5) having a spin beam (Fig 5); an operational heater (Fig 5, that which heats #56); a regenerative heater (Fig 5, that which heats #24 and Fig 5, #92 is also a regenerative heater);

a controller for coordinating an operation of the operational heater and the regenerative heater (Fig 5, #s 100 and 92 and col 5, line 59 - col 6, line 2);

at least one temperature sensor in communication with the controller (Fig 5);

a polymer melt source for (Fig 5, #18) providing a polymer melt to the spin beam;

the polymer melt source comprises an extruder (Fig 5);

the polymer melt source provides the polymer melt to at least one spinning pump (Fig 5, #20);

the at least one spinning pump meters the polymer melt to at least one spinning can through at least one melt-conducting part (Fig 5);

at least one spinning can receivers associated with the at least one spinning can (Fig 5);



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the at least one spinning pump meters the polymer melt to a plurality of spinning cans through a plurality of melt-conducting parts (Fig 9B) a total length of each of the plurality of melt-conducting parts is substantially the same (Fig 9B);

including a plurality of spinning can receivers, at least one of the plurality of spinning can receivers is associated with each of the plurality of spinning cans (Figs 6 and 9B);

at least one of the plurality of melt-conducting parts is associated with each of the plurality of spinning cans (Fig 6);

the operational heater is capable of heating the spin beam using a heat transfer medium (col 7, lines 35-52);

the heat transfer medium is one of an oil and a diphyl (col 9, lines 30-35);

the operational heater is capable of heating the spin beam to an operating temperature of between about 250 to 330.degree. C (the Examiner notes that the mediums taught are capable of the claimed temperature);

including a collection reservoir for the heat transfer medium (col 9, line 58, the closed loop reads on a collection reservoir);

a regenerative heater with operational heater (Fig 5) and spin beam (Fig5), the regenerative heater being removably attachable to the spin beam (Fig 5, the Examiner notes that the parts are removable);

the regenerative heater includes a trace heater in communication with a melt-conducting part of the spin beam (Fig 5);

the regenerative heater comprises a blower (Fig 5, #92P);

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the blower further includes a feed and an exhaust for communicating with a portion of the spin beam (Fig 5, the arrows shown between the #s 90);

the regenerative heater includes one of at least one convection heater, at least one radiation heater, and combinations thereof (Fig 5);

wherein operational heater is capable of being operated as the regenerative heater to a temperature between about 450 to 550.degree. C (the Examiner notes that the mediums taught are capable of the claimed temperature)

the regenerative heater and the operation heater are the same (the Examiner notes that either heater can be used for multiple purposes since they can be used at different temperatures.

11. Claims 1-6, 13, 15-18, 30, 31, 32, 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Kellert et al (5,268,132).

Kellert et al teaches an apparatus for spinning melt-spun filaments (Fig 1) having a spin beam (Fig 2, #26); an operational heater and a regenerative heater (Fig 1, heaters through #s 5 and 6, heaters through #s15 and 16);

a controller for coordinating an operation of the operational heater and the regenerative heater (col 2, lines 45-65);

at least one temperature sensor in communication with the controller (col 2, line 55-60 and #7);

a polymer melt source for (Fig 1, #2) providing a polymer melt to the spin beam;

the polymer melt source comprises an extruder (Fig 1);

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the polymer melt source provides the polymer melt to at least one spinning pump (Fig 1);

the operational heater is capable of heating the spin beam using a heat transfer medium (col 2, lines 50-55);

the operational heater is capable of heating the spin beam to an operating temperature of between about 250 to 330.degree. C (the Examiner notes that the mediums taught are capable of the claimed temperature);

including a collection reservoir for the heat transfer medium (Fig 1);

a regenerative heater with operational heater (Fig 1) and spin beam (Fig 1), the regenerative heater being removably attachable to the spin beam (Fig 2, the Examiner notes that the parts are removable);

the regenerative heater includes a trace heater in communication with a melt-conducting part of the spin beam (Fig 1);

the regenerative heater includes one of at least one convection heater, at least one radiation heater, and combinations thereof (Fig 1);

wherein operational heater is capable of being operated as the regenerative heater to a temperature between about 450 to 550.degree. C (the Examiner notes that the mediums taught are capable of the claimed temperature)

the regenerative heater and the operation heater are the same (the Examiner notes that either heater can be used for multiple purposes since they can be used at different temperatures.

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***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over any of Landoni (3,767,347), Krauss et al (5,866,050), Kellert et al (5,268,132) and in view of Zimmer (5,992,453).

Landoni, Krauss et al and Kellert teach the apparatus as discussed above.

Landoni, Krauss et al and Kellert fail to teach compressed air supply in communication with a melt-conducting part of the spin beam.

Zimmer teaches compressed air (col 3, lines 35-40) forced through to clean a melt conductin part.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the inventions of Landoni, Krauss or Kellert

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with a source of pressurized air as taught by Zimmer because such air can be used to clean-out/ empty out melt communication paths for further use.

15. Claims 19 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Landoni (3,767,347), Krauss et al (5,866,050), Kellert et al (5,268,132) and in view of Flakne (3,864,068).

Landoni, Krauss et al and Kellert teach the apparatus as discussed above.

Landoni, Krauss et al and Kellert fail to teach an electrical heater including at least one heating coil.

Flakne teaches the use of heating coils (Fig 5, #43) for the purpose of controllably heating a spinnerette (col 2, lines 13-26).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the inventions of Landoni, Krauss or Kellert with a heating coils as taught by Flaken because such coils demonstrate superior temperature controllability.

***Allowable Subject Matter***

16. Claims 22, 23 and 25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The prior art of record fails to teach or suggest the filter of either claim 22 or 25 in combination with the subject matter of the parent claims.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on M-F 8:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph S. Del Sole